



**MISSOURI STATE PUBLIC HEALTH LABORATORY
VIROLOGY LABORATORY**

MONKEYPOX INFORMATION

**INSTRUCTIONS FOR SUBMITTING SPECIMENS FOR MONKEYPOX TESTING TO
THE MISSOURI STATE PUBLIC HEALTH LABORATORY**

Please contact the Missouri Dept. of Health and Senior Services Section of Disease Investigation (SDI) at 573-751-6113 (800-392-0272, after hours) for consultation to determine if specimens should be collected.

I. Precautions for specimen collection and handling

Note: Only successfully vaccinated (within 3 years) personnel wearing appropriate barrier protection (N 95 or equivalent respirator, gloves, gown, etc.) should be involved in specimen collection for suspected cases of monkeypox. Masks and eyewear or face shields should be used if splashing is anticipated.

After contacting the SDI (see above) for approval to send the specimens, the samples should be collected in the Manner outlined below and placed in an appropriate biosafety-shipping container. See the following web site for IATA Guidelines for Packaging and Transporting Biological Specimens.

<http://www.cdc.gov/ncidod/monkeypox/pdf/specimenguide.pdf>

Specimens collected from patients with poxvirus infections can be stored under refrigeration and shipped on freeze packs if shipped within 24 hours.

Note: Each patient's lesions specimens must be packaged separately from other patient specimens to avoid Cross-contamination.

The following information is for specimens to be tested by the Missouri State Public Health Laboratory.

Go to the following web site for more detailed instructions on specimen collection:

<http://www.cdc.gov/ncidod/monkeypox/pdf/specimenguide.pdf>

II. Specimen Collection Procedure

Suitable specimens for virologic tests are: Please collect all specimens listed below.

- Vesicular or pustular tissue and fluid
- Roof of lesion or Scabs
- Serum for serological tests

www.dhss.state.mo.us

The Missouri Department of Health and Senior Services protects and promotes quality of life and health for all Missourians by developing and implementing programs and systems that provide: information and education, effective regulation and oversight, quality services, and surveillance of diseases and conditions.

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER: Services provided on a nondiscriminatory basis.

ALL SPECIMENS MUST BE LABELED WITH PATIENTS NAME

Stepwise collect procedure for patients with vesicular or pustular lesions

Try to obtain digital photographs of lesions sampled. Please send with specimens.

1. Put on personal protective equipment described above
2. Use scalpel (or a sterile 26 gauge needle) to open, and remove, the top of the vesicle or pustule.
3. Place the skin of the vesicle top into a 1.5 to 2- mL sterile screw-capped plastic tube with O-ring. Leave the material dry.
4. Scrape the base of the vesicle or pustule with the blunt edge of the scalpel, or with the wooden end of an applicator stick or swab.
5. Smear the scrapings onto a clean glass microscope slide.
6. Apply a microscope slide to the vesicular fluid multiple times, with progressive movement of the slide, to make a touch prep. Make 2-3 different slides.
7. If a slide is not available, swab the base of the lesion with a polyester or cotton swab place in a screw-capped plastic vial, break off swab handle and screw on lid. ***Do not add transport medium to the vial.***
8. Allow slides to air-dry for approximately 10 minutes.
9. Store slides in plastic slide holders for shipping. Parafilm may be used to wrap the slide holder to prevent accidental opening. Store slides from different patients in **separate** plastic slide holders to prevent cross contamination.
10. Draw blood samples.
 - a. 7 to 10 cc into a plastic marble -topped tube, plastic red-top, or a plastic yellow-topped serum separator tube for serologic assays.
 - c. **If glass tubes are used**, place in Styrofoam tube protector for shipment

Note: Blood samples from person with severe, dense rash may be difficult to draw as the skin may slough off. A central line may be needed for access in cases where a peripheral blood draw is difficult.

11. Place specimens from a **single patient** into a biohazard bag with an outside label that includes:
 - a. Patient name,
 - b. Date of collection
12. Package specimens from a single patient (except biopsies):
 - a. On gel packs at 4°C,
 - b. In appropriate biosafety shipping containers in a manner to withstand all shocks, pressure changes, or other conditions incident to ordinary handling in transportation, and
 - c. In a manner to avoid leakage of contents.
13. Specimens may be stored in conditions outlined above if shipped within 24 hours of collection. If this is not possible, store all samples, except serum, on dry ice or at -20°C to -70°C until, and through shipment. Serum should be kept at 4°C until, and through shipment. If there will be a delay in shipping, spin serum in marble or yellow-top tubes to separate from clot, store at 4°C, and ship at 4°C.
14. After specimen collection is completed, all protective materials worn by the specimen collector (gloves, mask, gown, etc.) and all used sample collection materials (vacutainer holders, swabs, etc.) must be placed in red biohazard bags and autoclaved or incinerated prior to disposal. Needles should be disposed of in an appropriate sharps container.

Submit specimens with a CDC Monkeypox form. This form can be found at:

<http://www.cdc.gov/ncidod/monkeypox/pdf/specimenform2.pdf>

Send Specimens to: Missouri Dept. of Health and Senior Services Laboratory
Attention: Virology Unit
307 West McCarty
Jefferson City, MO 65101

TESTING RESULTS

Serum will not be tested but will be sent to CDC if lesion material tests positive for Orthopox.
Lesion material, slides or vesicular swab, will be tested by Polymerase Chain Reaction (PCR)
For Non-Variola Orthopox.

POSITIVE PCR: Indicates the presence of Non-Variola Orthopox Virus DNA .
Specimens will be sent to CDC for confirmation and species identification.

NEGATIVE PCR: Non-Variola Orthopox not detected.



HUMAN CASES INTERIM FIELD SPECIMEN COLLECTION FORM ACCESSIONING FORM

CDC/NCID/POXVIRUS SECTION
1600 CLIFTON ROAD MS G-18
ATLANTA, GA 30333

TEL: (404) 639-4931 FAX: (404) 639-3111

NI = No information available State or Local ID# _____ CDC Pox unique ID# _____

<i>CASE NUMBER (Poxvirus Lab use only)</i>	<i>DATE RECEIVED</i>
	/ /

Consultation with the state epidemiologist (www.cste.org/members/state_and_territorial_epi.asp) and state health laboratory (www.aphl.org/public_health_labs/index.cfm) is necessary for submission instructions before sending specimens to CDC.

<i>PATIENT INFORMATION</i>	<i>PROVIDER INFORMATION (SUBMITTED BY)</i>
<input type="checkbox"/> CLINICAL <input type="checkbox"/> ENVIRONMENTAL Last Name: _____ First Name: _____ CITY: _____ STATE: _____ COUNTY: _____ ZIP CODE: _____ COUNTRY: _____ SPECIES (If other than human): _____ SEX: M / F / NI DOB: ____/____/____ NI HOSPITAL PATIENT NUMBER: _____	LAST NAME: _____ FIRST NAME: _____ ADDRESS: _____ _____ CITY: _____ STATE: _____ COUNTY: _____ ZIP CODE: _____ COUNTRY: _____ TELEPHONE: _ (____) _____ TEL 2: _ (____) _____ FAX: _ (____) _____ EMAIL: _____ DATE CASE IDENTIFIED: / /

CLINICAL HISTORY

PATIENT HOSPITALIZED? Y / N / NI

OUTCOME? RECOVERED DIED DATE OF DEATH: ____/____/____ NI

FEVER: Y / N / NI FEVER ONSET DATE: ____/____/____

RASH: Y / N / NI RASH ONSET DATE: ____/____/____

LESION TYPE:	____ MACULES	APPROX NUMBER: ____	LOCATION: ____
	____ PAPULES	APPROX NUMBER: ____	LOCATION: ____
	____ VESICLES	APPROX NUMBER: ____	LOCATION: ____
	____ PUSTULES	APPROX NUMBER: ____	LOCATION: ____

VACCINE HISTORY

HAS THE PATIENT EVER HAD SMALLPOX? Y / N /

HAS THE PATIENT EVER RECEIVED THE VACCINIA (SMALLPOX) VACCINE? Y / N /

VACCINATION DATE 1: ____ VACCINATION DATE 2: ____

DOES THE PATIENT HAVE A VACCINATION SCAR? Y / N /

HAS THE PATIENT EVER HAD CHICKENPOX? Y / N /

HAS THE PATIENT RECEIVED THE VARICELLA VACCINE? Y / N /

VACCINATION DATE 1: ____ VACCINATION DATE 2: ____

WAS THE PATIENT RECENTLY EXPOSED TO SMALLPOX? Y / N / NI # OF DAYS AGO: ____

CHICKENPOX? Y / N / NI # OF DAYS AGO: ____

DID THE PATIENT TAKE STEROIDS OR IMMUNOSUPPRESSANT DRUGS DURING THE MONTH PRIOR TO THE RASH ONSET? Y / N / NI

ADDITIONAL CLINICAL OBSERVATIONS AND BRIEF PATIENT HISTORY

DIAGNOSTIC NOTES

CLINICAL DIAGNOSIS

☐ ORTHOPOX
☐ VACCINIA
☐ MONKEYPOX
☐ VARIOLA
☐ VARICELLA
☐ VARICELLA ZOSTER
☐ COWPOX
☐ OTHER SPECIFY: _____

INVESTIGATOR INFORMATION

(Person submitting case history and specimens)

LAST NAME: _____
FIRST NAME: _____
TITLE: _____
ORGANIZATION: _____
ADDRESS: _____
CITY: _____ STATE: _____ ZIP: _____
TELEPHONE: __ () _____ - _____ FAX: __ () _____ - _____
EMAIL: _____

<i>SPECIMEN MATERIAL</i>		
DATE COLLECTED: _____ / _____ / _____		
<u>SAMPLE MATERIAL</u> <input type="checkbox"/> MACULE/PAPULE <input type="checkbox"/> VESICLE SKIN <input type="checkbox"/> VESICLE FLUID <input type="checkbox"/> PUSTULE SKIN <input type="checkbox"/> PUSTULE FLUID <input type="checkbox"/> CRUST <input type="checkbox"/> OROPHARYNGEAL TISSUE <input type="checkbox"/> OTHER TISSUE <input type="checkbox"/> CSF <input type="checkbox"/> BLOOD <input type="checkbox"/> SERUM <input type="checkbox"/> OTHER <input type="checkbox"/> NO INFORMATION	<u>METHOD</u> <input type="checkbox"/> SWAB <input type="checkbox"/> SLIDE <input type="checkbox"/> VACUTAINER <input type="checkbox"/> CONTAINER <input type="checkbox"/> EM GRID <input type="checkbox"/> TOUCHPREP <input type="checkbox"/> BIOPSY/ FORMALIN <input type="checkbox"/> BIOPSY/ DRY	DASH NUMBER: ASTRO: BRRAT: BT NUMBER:
ANATOMICAL SITE: _____		
<i>SPECIMEN MATERIAL</i>		
DATE COLLECTED: _____ / _____ / _____		
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